

WHAT IS CLAIMED IS:

1. A method of processing frames for a TCP connection, comprising:
  - processing a first portion of the frames using an offload unit to produce first processed frame data; and
  - processing a second portion of the frames using the offload unit to produce second processed frame data.
  - processing the second processed frame data using a TCP stack executed on a CPU to produce third processed frame data.
2. The method of claim 1, further comprising determining whether a special case exists during the processing of each of the frames.
3. The method of claim 1, wherein at least a portion of the first processed frame data is payload data.
4. The method of claim 1, wherein at least a portion of the second processed frame data is partially processed frame header data.
5. The method of claim 1, wherein at least a portion of the second processed frame data is payload data.
6. The method of claim 1, further comprising uploading the first processed frame data to a user buffer.
7. The method of claim 1, further comprising uploading the second processed frame data to a legacy buffer.
8. The method of claim 1, further comprising finishing processing of the second processed frame data by the TCP stack executed on the CPU.

9. A system for processing data for a TCP connection, comprising:
- a TCP stack configured to process received frames stored in at least one legacy buffer;
  - a software driver configured to interface between the TCP stack and an offload unit; and
  - the offload unit configured to process frames received on a delegated connection to produce payload data and partially processed frames.
10. The system of claim 9, wherein the offload unit is configured to process frames for which a special case does not exist.
11. The system of claim 9, wherein the offload unit is configured to notify the TCP stack when a special case is determined to exist.
12. The system of claim 9, wherein the TCP stack is configured to process frames for which a special case exists.
13. The system of claim 9, wherein the offload unit is configured to upload partially processed frames to at least one legacy buffer.
14. The system of claim 9, wherein the offload unit is configured to upload the payload data to at least one user buffer.
15. The system of claim 9, wherein the offload unit is configured to receive additional frames while uploading payload data to a legacy buffer or uploading processed frames to a user buffer.

16. A method of processing frames for delegated and non-delegated TCP connections, comprising:
- processing delegated TCP connections using an offload unit, the offload unit configured to process frames for which special cases do not exist;
  - processing non-delegated TCP connections using a TCP stack executing on a CPU; and
  - processing all frames for which special cases exist using the TCP stack executing on the CPU.
17. The method of claim 16, wherein the processing of the delegated TCP connections produces payload data.
18. The method of claim 17, wherein the payload data is uploaded by the offload unit to a portion of system memory.
19. The method of claim 16, further comprising updating connection state information stored in the offload unit when data is received for a delegated connection.
20. The method of claim 16, further comprising updating connection state information stored in the offload unit when data is transmitted for a delegated connection.